

CLAIMS

- 1 1. An input device, comprising:
 - 2 a key for causing generation of a key event when the key is activated, the key having a
 - 3 concave surface that forms a well with an open interior region defined by sides of the well;
 - 4 a light emitter positioned at one side of the well emitting a beam of light across the
 - 5 open interior region to an opposite side of the well; and
 - 6 a light detector positioned at the opposite side of the well for receiving the beam of
 - 7 light and for indicating activation of the key when the beam of light is obstructed from being
 - 8 received by the light detector.
- 1 2. The input device of claim 1, further comprising a top surface, and wherein the concave
- 2 surface of the key is depressed below the top surface of the input device.
- 1 3. The input device of claim 1, wherein the beam of light is infrared light.
- 1 4. The input device of claim 1, wherein the well is a first well and the key has a second concave
- 2 surface defining a second well situated above the first well.
- 1 5. The input device of claim 1, further comprising a light source illuminating the interior region
- 2 of the well.
- 1 6. The input device of claim 5, wherein the light source illuminates the interior region of the
- 2 well of the key individually of wells of other keys of the input device.
- 1 7. The input device of claim 5, wherein the light source illuminates the interior region of the
- 2 well of the key with light of a first wavelength when the key is activated and with light of a
- 3 second wavelength when the key is idle.

- 1 8. The input device of claim 5, wherein the light source illuminates the interior region of the
2 well with light of a first wavelength and transitions gradually to illuminating the interior
3 region of the well with light of a second wavelength when a state of the key transitions
4 between an activate state and an idle state.
- 1 9. The input device of claim 1, further comprising a speaker for emitting an audible signal in
2 response to an activation of the key.
- 1 10. The input device of claim 1, further comprising circuitry for electrically generating an audible
2 signal in response to an activation of the key.
- 1 11. A method for generating a key event to be sent to a computing device, the method
2 comprising:
3 associating a key structure for causing generation of the key event when the key
4 structure is activated;
5 emitting a beam of light from one side of the key structure to an opposite side of the
6 key structure;
7 detecting the beam of light at the opposite side of the key structure; and
8 signaling activation of the key structure upon detecting obstruction to the beam of
9 light.
- 1 12. The method of claim 11, further comprising illuminating the key structure in response to the
2 activation of the key.
- 1 13. The method of claim 11, further comprising changing a color of illumination of the key
2 structure when the key structure is activated.

- 1 14. The method of claim 13, further comprising change the color of illumination of the key
2 structure to a second color of illumination when a state of the key structure transitions from
3 activated to an idle state.
- 1 15. The method of claim 11, further comprising detecting the beam of light at the opposite side of
2 the key structure after the key is activated, and locking the key structure in an activated state
3 until obstruction to the beam of light is subsequently detected.
- 1 16. The method of claim 11, further comprising electronically generating a sound in response to
2 the activation of the key structure.
- 1 17. The method of claim 16, further comprising selecting the type of sound generated.
- 1 18. A keyboard for providing key events to a computing device, the keyboard comprising:
2 a plurality of keys, each key causing generation of an associated key event when that
3 key is activated; and
4 a light source system illuminating each key independently of the other keys of the
5 plurality of keys.
- 1 19. The keyboard of claim 18, wherein the light source system includes means for illuminating
2 one of the plurality of keys with a first color and another of the plurality of keys with a second
3 color.
- 1 20. The keyboard of claim 18, wherein the light source system includes means for illuminating
2 one of the plurality of keys with a first color while another of the plurality of keys is
3 unlighted.

- 1 21. The keyboard of claim 18, wherein the light source system includes means for illuminating
2 one of the plurality of keys with a first color when the key is activated and for illuminating
3 that one key with a second color when the key is in an idle state.
- 1 22. The keyboard of claim 18, wherein the light source system includes means for illuminating
2 one of the plurality of keys with a first color and for transitioning gradually from the first
3 color to a second color in response to a change in state of that one key.
- 1 23. A keyboard for providing key events to a computing device, the keyboard comprising:
2 a key for causing generation of a key event when the key is activated; and
3 means for activating the key without physically touching the key.
- 1 24. A computing device, comprising an input device for receiving input signals from a user of the
2 computing device, the input device having a plurality of keys, each key causing generation of
3 an associated key event when that key is activated, each key having a concave surface that
4 forms a well with sides and an open region defined by the sides, a light emitter positioned on
5 one side of the well emitting a beam of light across the open region to an opposite side of the
6 well, and a light detector positioned at the opposite side of the well for receiving the beam of
7 light and for indicating activation of that key when the beam of light emitted by the light
8 emitter is obstructed from being received by the light detector.